# OSRAM Opto Semiconductors PASS Report



OSRAM Opto Semiconductors Inc. 28845 Cabot Dr. Suite 900 Novi, MI 48377 USA

PASS Request No.: 69412

PASS Request Create Date: 03/13/2019

PASS Request Region: NAFTA

Report Issue Date: 03/27/2019

Project Title: System Metrology Happy leaf

Originator: External - Customer

Engineering Contact:

Name: Deepak Parajuli

Email: deepak.parajuli@osram-os.com

Sales Contact:

Name: Ryan Glazier

Email: Ryan.Glazier@osram-os.com

Customer:

Company Name: Happy Leaf LLC Contact Name: Victor Zaderej Position Title: Owner

Phone Number: (630) 728-1107

Email Address: victor zaderej@sbcglobal.net

Address Line 1: 3588 S Daysville Rd

City: Oregon

Country: UNITED STATES State/Province/Region: IL Zip/Country Code: 61061

### Luminaire Name/ID:

Pic of luminaire:

Device Description: Happy Leaf fixture

LED Part # (s): OSLON Family

Application:

Horticulture LED Grow Light

Primary Distributor/Sales Representative:

Company Name: TEQ Sales Contact Name: Gary OConnor Email: goconnor@teqsales.com

AE Status:

Actual Complete Date: 03/27/2019

Contents

Integrating Sphere Measurement

System Metrology - Integrating Sphere Measurement

Two sets (4 Lights per set, 8 total). Customer would like to evaluate the following for each sets of Light:

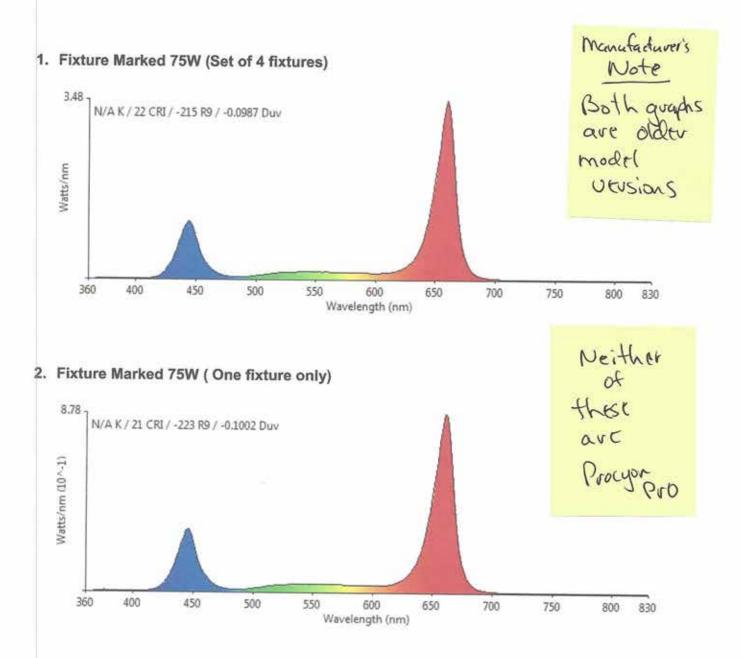
1. Power Draw (included a "kill a watt" meter)

2. Total PAR (umol/sec)

3. Spectral Graph

### Measured data instant:

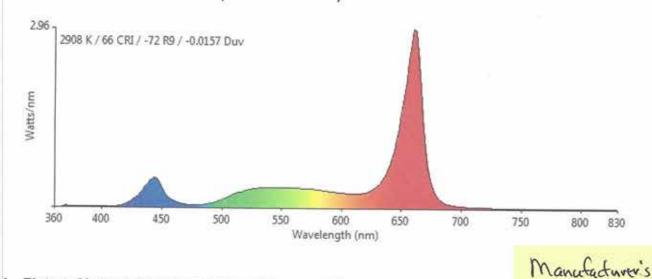
Fixture/ Power Supply	PPF (umol/s)	Watts(J/s) using meter provided	umol/J	Manufactures
Fixture Marked 75W (Set of 4)	603	274	2.20	- Disregard
Fixture Marked 75W ( Set of 1)	158	71	2.22	-Disregard
Fixture Marked Mint Green (Set of 4)	594	282	2.10	= Procyon Pro
Fixture Marked Mint Green (Set of 1)	151	74	2.04	= Progen Pr



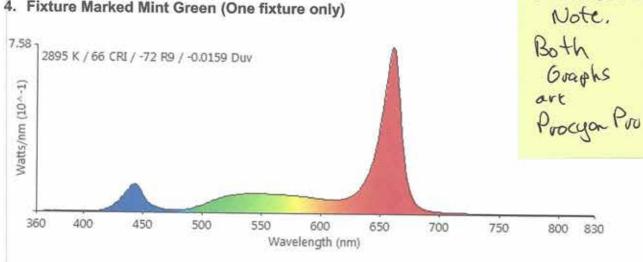
Page 3 of 6



### 3. Fixture Marked Mint Green (Set of 4 fixtures)



## 4. Fixture Marked Mint Green (One fixture only)



Page 4 of 6



#### Conclusion:

Provided two set of fixtures have been measured to find PPF (umol/s) and PPF efficacy (umol/j). For the set of fixture marked as "75W" (4 Fixture total) PPF and PPF efficacy found to be 603 umol/s and 2.20 uml/j respectively. For another set of fixture (4 Fixture total) marked as "Mint" is found to be 594 umol/s and 2.10 umol/j respectively.

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